

Laboratory Experiment Proposal Submission

Experimental Details

Experiment location: A127
Experiment title: Sintering of sample
Experiment date: Jan. 18 2011
Experiment contactname: Andrew Jackson
Experiment contactphone: 0765158797
Experiment contactemail: mark.laver@psi.ch

Chemicals Used

<u>Chemical Name</u>	<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>	<u>Special Hazards</u>
Argon	0	0	0	NONE
(La,Bi,Ca)MnO3	Blank	Blank	Blank	NONE

Reactants and Resulting Samples

<u>Chemical Name</u>	<u>Hazardous?</u>	<u>Known Hazards</u>
(La,Bi,Ca)MnO3	N	

Required Safety Equipment

- Glove Hot
- Tongs

Required Laboratory Equipment

- Vacuum Pump
- Other

Experimental Write Up

Aim: To sinter our sample of (La,Bi,Ca)MnO₃ at temperatures between 1200 deg. C and 1400 deg. C in an argon atmosphere.

Method: We plan to use a furnace with a small argon flow with the (La,Bi,Ca)MnO₃ [exact composition: La_{0.458} Bi_{0.167} Ca_{0.375} Mn O₃] sample in an Al₂O₃ crucible. We intend to sinter the sample at the temperatures mentioned for around 12 to 24 hours.

(La,Bi,Ca)MnO₃ is a new ceramic material, part of the (La_{5/8},Ca_{3/8})MnO₃ family of compounds.

Experimenter Signature: _____

Date: _____

Lab Responsible Signature: _____

Date: _____